

# Installing PyTAPS

This page describes the specifics of building PyTAPS to work with MOAB, CGM, and Lasso. For a more general discussion, consult the [PyTAPS documentation](#).

## Building C Dependencies

Since Python extension modules are shared libraries, MOAB, CGM, and Lasso must also be built as shared libraries (or using `--with-pic`, which won't be covered here). After building, be sure to update your `LD_LIBRARY_PATH` to include the lib directories for MOAB, CGM, and Lasso. In addition to making it possible to load these libraries, it also helps PyTAPS' install process, since it peeks at your `LD_LIBRARY_PATH` to try to find `iXxx-Defs.inc`.

If you don't have one or more of MOAB, CGM, and Lasso, PyTAPS will automatically disable those components and install modules for only the ones you have.

## Installing Python Dependencies

PyTAPS requires a couple of Python modules to operate. At minimum, you need NumPy installed. Setuptools (version 0.6rc11 or better) is also required, but will be (temporarily) installed automatically if it's not present. It's also recommended to have `pip` to simplify the installation.

## Local Installations

(Note: if you plan on installing PyTAPS into the default system location, skip this step.)

There are lots of ways to make local installations of Python packages. If you require anything other than the simple case (that is, modules you always see but aren't visible to other users), use `virtualenv`. We won't discuss `virtualenv` here, but suffice to say, it allows you to make private Python modules on a per-directory basis. For the simple case, the easiest way is to tell Python to install all its packages in a particular location. On Unix systems, this can be accomplished with the "home scheme". You can use this on a per-package basis by manually specifying the home directory, or you can make a global config file named `~/.pydistutils.cfg`. Your config file should look like this:

```
[install]
home=/path/to/install
```

If your `/path/to/install/` folder is empty, you may have to create first new folders inside, `/path/to/install/lib` and `/path/to/install/lib/python`.

Then, just add `/path/to/install/lib/python` to your `PYTHONPATH` environment variable and run your chosen setup command.

## Installing PyTAPS

Assuming everything has been set up as above, you can install PyTAPS by typing `pip install pytaps` on the command line. If you don't have `pip`, you can use `easy_install` via `easy_install pytaps` or by

downloading the tarball, extracting it, and running `python setup.py install`.

If you have a development version for MOAB, CGM, Lasso, which you obtained using svn, you may have to get a development version of pytaps with

```
svn co https://svn.mcs.anl.gov/repos/ITAPS/python/trunk pytaps, and then you can and run  
python setup.py install
```